

REMARKS/ARGUMENTS

The amendments and remarks hereto attend to all outstanding issues in the pending office action of 1 July 2004. Claims 1-34 and 36-56 remain pending in this application. Claims 1, 10, 11, 17, 20, 46, 48-50, and 54 are amended. Claim 35 is canceled.

In the Drawings

FIG. 3 is amended to show first and second end stations 306 and 308 connecting with second terminal 305 of AC power source 304, and not with first terminal 303 of AC power source 304. FIG. 3 as originally filed incorrectly showed end station 308 connecting with first terminal 303 of AC power source 304. The change to FIG. 3 finds support in the specification at page 11, lines 17-19. No new matter is added through the amendment to FIG. 3.

In the Specification

The first paragraph of the specification is amended (1) to clarify the relationship of the instant application to the applications to which it claims priority, and (2) to provide the application number of an application which had not received a number as of the filing of the instant application. No new matter is added to the application through the specification amendment.

In the Claims

Claims 1 and 36 are amended to clarify that the cableway in the claim is configured for movement. This claim amendment finds support in the specification at page 2, lines 14-18 and at page 5, lines 27-30.

Claims 20 and 50 are amended to clarify that the system melts ice using power having a voltage in a range of about from 10 to 20 volts. This claim amendment finds support in the specification at page 3, lines 27-28, at page 4, lines 6-7, at page 16, lines 10-17, and in original claim 35.

Claims 10, 11, 17, 20, 46, 48-50, and 54 are amended to correct minor typographical errors and improve grammar and support for antecedents.

No new matter is added through any of the claim amendments.

Response to Office Action

1 and 2. The Examiner contends that Applicants have not complied with one or more conditions for receiving the benefit of an earlier filing date under 35 U.S.C. §120. Applicants submit that the specification amendment included herewith brings the specification into compliance with all conditions of 35 U.S.C. §120.

3, 4 and 5. Claim Rejections – 35 USC §102(b)

Claims 1, 15-18, 20, 30-34, 36-52, and 54-56 stand rejected as being anticipated by U.S. Patent No. 4,190,137 ("Shimada"). Applicants respectfully disagree. To anticipate a claim, the reference must teach every element of the claim and "the identical invention must be shown in as complete detail as is contained in the ... claim." *MPEP 2131* citing *Verdegaal Bros. V. Union Oil Co. of California*, 814 F.2d 628, 2 USPQ2d 1051 (Fed. Cir. 1987) and *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 9 USPQ2d 1913 (Fed. Cir. 1989).

Applicants' claim 1, as amended, requires the following elements in a system for de-icing a cableway:

a cableway configured for movement, and

a power source electrically connected to the cableway for heating the cableway.

Element (a) of claim 1 is not present in Shimada, which teaches only an apparatus for deicing trolley wires. Nowhere does Shimada teach an apparatus for deicing a "cableway" – which is defined in the Merriam-Webster Online Dictionary as "a suspended cable used as a track along which carriers can be pulled." Applicants use the term "cableway" in this meaning, and further note that "the term 'cableway system', 'transport system' and related terms refer principally to cableways used for support or movement of chair ski lifts, surface lifts (e.g., skis remain on the ground and are pulled forward), gondolas, aerial tramways, ropeways, funicular railways, cable cars and other cableway systems." Applicants' specification, page 5, lines 27-30.

Moreover, Applicants have amended claim 1 to clarify that the cableway is configured for movement. Shimada does not discuss a cableway, let alone a cableway configured for movement. Since a cableway configured for movement is not present in Shimada, claim 1 cannot be anticipated, and Applicants request reconsideration and withdrawal of the rejection of claim 1 under 35 USC §102 as anticipated by Shimada.

Claims 15-18 depend directly or indirectly from claim 1 and benefit from like arguments. Applicants request reconsideration and withdrawal of the rejection of claims 15-18 under 35 USC §102 as anticipated by Shimada.

Claim 20, as amended, requires the following elements in a system for deicing an elongated conductor:

- a) an elongated conductor
- b) a power source electrically connected to the elongated conductor; wherein the elongated conductor comprises a conductor span, said conductor span being separately connected to a power source, and wherein the system melts ice using power having a voltage in a range of about from 10 to 20 volts.

Element (b) of claim 20 is not present in Shimada. Nowhere does Shimada disclose using power having a voltage in a range of about from 10 to 20 volts for deicing. Applicants, therefore, request reconsideration and withdrawal of the rejection of claims 15-18 under 35 USC §102 as anticipated by Shimada.

Claims 30-33 depend directly or indirectly from claim 20 and benefit from like arguments. Applicants request reconsideration and withdrawal of the rejection of claims 30-33 under 35 USC §102 as anticipated by Shimada.

Claim 34 also depends from claim 20 and benefits from like arguments, but has additional reasons for patentability. Claim 34 requires the following elements in a system as in claim 20:

- a) a plurality of power sources,
- b) wherein the elongated conductor comprises a first conductor segment and a second conductor segment, the first conductor segment is connected to a first power source in a first circuit, and the second

conductor segment is connected to a second power source in a second circuit.

Elements (a) and (b) of claim 34 are not present in Shimada. Applicants respectfully disagree with the Examiner's contention that "Shimada discloses a plurality of power sources (not shown)... the first cable segment (denoted by left L) is connected to a power source (not shown, at 21)... the second cable segment (denoted by right L in Fig 2) is connected to a power source (not shown, at second 21)..." Shimada does disclose the power source, and does not disclose a plurality of power sources. "The three feeder lines 15R, 15S and 15T are connected at the ends thereof through three supply lines 150R, 150S and 150T respectively to a substation 20." Shimada, col. 4, lines 40-42; also see Shimada, FIG. 2. Respectfully, there is no teaching of a plurality of power sources in Shimada. Applicants therefore request reconsideration and withdrawal of the rejection of claim 34 under 35 USC §102 as anticipated by Shimada.

Claim 36, as amended, reads:

36. A method for de-icing a cableway configured for movement, comprising a step of:

applying electric power to the cableway for heating the cableway.

As discussed above, Shimada does not discuss a cable configured for movement, let alone a cableway. Since a cableway configured for movement is not present in Shimada, claim 36 cannot be anticipated, and Applicants request reconsideration and withdrawal of the rejection of claim 36 under 35 USC §102 as anticipated by Shimada.

Claims 37-49 depend directly or indirectly from claim 36 and benefit from like arguments. However, many of these claims have additional reasons for patentability. For example, claim 41 requires electric power having a voltage in a range of about from 10 to 20 volts. As discussed above with respect to claim 20, Shimada does not disclose using power having a voltage in a range of about from 10 to 20 volts. Claim 42 requires applying about 5 to 100 watts per meter of cableway; Shimada does not disclose applying about 5 to 100 watts per meter of cableway. Claim 43 requires applying low-frequency AC having a frequency in a range of about

from 50 to 200 Hz; Shimada does not disclose applying low-frequency AC having a frequency in a range of about from 50 to 200 Hz. Applicants, therefore, request reconsideration and withdrawal of the rejection of claims 37-49 under 35 USC §102 as anticipated by Shimada.

Claim 50, as amended, requires the following steps in a method for de-icing an elongated conductor:

- a) separately connecting a conductor span with a power source,
- b) applying electric power having a voltage in a range of about from 10 to 20 volts to the conductor span.

Element (b) of claim 50 is not present in Shimada. As discussed above with respect to claims 20 and 41, Shimada does not disclose using power having a voltage in a range of about from 10 to 20 volts. Applicants request reconsideration and withdrawal of the rejection of claim 50 under 35 USC §102 as anticipated by Shimada.

Claims 51, 52 and 54-56 depend directly or indirectly from claim 50 and benefit from like arguments. Applicants request reconsideration and withdrawal of the rejection of claims 51, 52 and 54-56 under 35 USC §102 as anticipated by Shimada.

Claims 1-2, 4, 6-14 and 20-29 stand rejected as being anticipated by U.S. Patent No. 4,135,221 ("Genrikh"). Applicants respectfully disagree.

As discussed above, claim 1 as amended requires, *inter alia*, a cableway configured for movement. Although the Examiner states, "Genrikh discloses a system... for de-icing a cableway..." Applicants respectfully disagree. Genrikh discloses only systems for de-icing a high voltage network. For example, "The invention relates to power engineering and, in particular, to a high-voltage network. The proposed high-voltage network can be employed in areas of severe ice." Genrikh, col. 1, lines 5-10. The Examiner also states, "Genrikh discloses a system (Fig 2) comprising a cableway (8)..." Again, Applicants respectfully disagree, and point out that Genrikh does not define item 8 as a cableway: "...a disconnected phase of the overhead line 8..." Genrikh, col. 1, lines 42-43. Neither a "high voltage network" nor an "overhead line" is a cableway, let alone a cableway configured for movement. Since a cableway configured for movement is not present in Genrikh,

claim 1 cannot be anticipated, and Applicants request reconsideration and withdrawal of the rejection of claim 1 under 35 USC §102 as anticipated by Genrikh.

Claims 2, 4 and 6-14 depend directly or indirectly from claim 1 and benefit from like arguments; reconsideration and withdrawal of the rejection of claims 2, 4 and 6-14 under 35 USC §102 as anticipated by Genrikh is therefore requested.

As discussed above, claim 20 as amended requires, *inter alia*, power having a voltage in a range of about from 10 to 20 volts. Nowhere does Genrikh disclose power having a voltage in a range of about from 10 to 20 volts. Claims 21-29 depend directly or indirectly from claim 20 and benefit from like arguments; reconsideration and withdrawal of the rejection of claims 20, 21 and 22-29 under 35 USC §102 as anticipated by Genrikh is therefore requested.

6, 7, 8 and 9. Claim Rejections – 35 USC §103(a)

The following is a quotation from the MPEP setting forth the three basic criteria that must be met to establish a *prima facie* case of obviousness.

To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the references or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. MPEP §2142, citing *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).

Claims 3, 5, 19 and 22 stand rejected under 35 USC §103(a) as unpatentable over Genrikh (claim 35 was also rejected but is canceled herewith). Applicants respectfully disagree. First, each of claims 3, 5, 19 and 22 depends from a claim that Applicants believe to be allowable over all art of record, as discussed above. Second, for each of these claims, the Examiner's holding of obviousness rests on the argument that "where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art." Applicants contend Genrikh does not disclose "the general conditions" of these claims in sufficient detail, and point out that

A particular parameter must first be recognized as a result-effective variable, i.e., a variable which achieves a recognized result, before the determination of the optimum or workable ranges of said

variable might be characterized as routine experimentation. MPEP §2144.05(II)(B), citing *In re Antonie*, 559 F.2d 618, 195 USPQ 6 (CCPA 1977).

With respect to claim 3, nowhere does Genrikh teach or suggest the general condition of a particular frequency range as result-effective for de-icing. With respect to claims 5 and 22, nowhere does Genrikh teach or suggest the general condition of a particular range of power per length of cableway as result-effective for de-icing. With respect to claim 19, nowhere does Genrikh teach or suggest the general condition of power having a voltage in a particular range as result-effective for de-icing and consistent with safety. Since Genrikh's entire disclosure is about high-voltage networks, safety of personnel is not a relevant issue, as compared to Applicants' invention wherein passengers may be present on a ski lift. For example, "... a de-icing system and a method in accordance with the invention are also useful during ski lift operations when the use of low voltages or of electric insulation reduces the hazard of a cableway carrying electric current." Applicants' specification, page 10, lines 11-13. "The low voltage (e.g., 10-20 volts) reduces the risk of injury to persons." Applicants' specification, page 16, lines 16-17.

Thus, not only does Genrikh fail to disclose Applicants' claimed values of the particular variables, Genrikh also fails to recognize that the conditions are result-effective variables. Applicants therefore contend that claims 3, 5, 19 and 22 are not *prima facie* obvious over Genrikh, and request reconsideration and withdrawal of their rejection under 35 USC §103(a) as unpatentable over Genrikh.

Claims 41-43 and 53 stand rejected under 35 USC §103(a) as unpatentable over Shimada. Applicants respectfully disagree. First, each of claims 41-43 and 53 depends from a claim that Applicants believe to be allowable over all art of record, as discussed above. Second, like claims 3, 5, 19 and 22 discussed above, the Examiner's holding of obviousness of claims 41-43 and 53 rests on the argument that "where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art." Applicants contend that Shimada, like Genrikh, does not disclose that AC frequency, power per meter of cableway, and/or voltage of a power source are result-effective variables. The Examiner concedes (on page 13 of the present office action) that Shimada, like Genrikh, does not disclose Applicant's claimed values of these variables. Applicants

therefore contend that claims 41-43 and 53 are not *prima facie* obvious over Shimada, and request reconsideration and withdrawal of their rejection under 35 USC §103(a) as unpatentable over Shimada.

In view of the above Amendments and Remarks, Applicant has addressed all issues raised in the Office Action dated 1 July 2004, and respectfully solicits a Notice of Allowance. Should any issues remain, the Examiner is encouraged to telephone the undersigned attorney.

Applicant hereby authorizes the fee of \$450 for a 2-month extension of time to be charged to Deposit Account No. 12-0600. Applicant believes no other fees are currently due, however, if any fee is deemed necessary in connection with this Amendment and Response, please charge Deposit Account No. 12-0600.

Respectfully submitted,

LATHROP & GAGE L.C.

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AMENDMENT TO THE DRAWINGS

The attached sheet of drawings includes changes to FIG. 3. This sheet replaces the original sheet including FIG. 3.

ATTACHMENTS: REPLACEMENT SHEETS

The replacement sheet for FIG. 3 is page 19 of this paper.